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PORT OF PORTLAND

October 24, 2001

Mr. Rodney Struck
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Subject: Marine Terminal 1 South
Response to Review Comments on the Remedial Investigation Report
ECSI File No. 2042

Dear Mr. Struck:

The Port of Portland (Port) has prepared the following response to the Oregon Department of Environmental Quality (DEQ) review comments on the Marine Terminal 1 (T1) South Remedial Investigation (RI) Report. Many of these issues have already been addressed in the T1 South Groundwater Monitoring Work Plan and the T1 South Risk Assessment Work Plan previously submitted to DEQ. The Port's Response to DEQ's general and specific comments (in italics) are summarized below.

DEQ General Comments

Comment A: *Section 4. Has a conceptual site model and evaluation of exposure pathways been conducted? It's not clear whether adequate data has been collected to evaluate each of the complete pathways (e.g., storm water). Action: The revised RI report or Risk Assessment should present the conceptual site model and address each potentially complete exposure pathway.*

Response: A conceptual site model and evaluation of exposure pathways will be included in the risk assessment (RA) currently being prepared for the site.

Comment B: *Based on the documented impacts to groundwater, monitoring wells are needed to characterize site hydrogeologic conditions and to provide data of adequate quality for risk assessment purposes. Action: A monitoring well network should be installed in key areas to validate the groundwater data collected from the direct push borings, monitor water quality variation over time, define groundwater flow directions at the site, and provide data to determine if a complete migration pathway to the Willamette River exists. A work plan should be submitted to DEQ that includes a description of the proposed monitoring well network and groundwater quality monitoring. Please provide DEQ with your schedule for submitting this work plan.*

Response: Seven groundwater monitoring wells were installed at the site in August 2001 in accordance with the Work Plan (Addendum No. 2) for Groundwater Monitoring and DEQ comments on the Work Plan Addendum No. 2 dated August 7, 2001.

Comment C: *Boring logs for the direct push probes should be included in the RI report. Action: Either drafted logs or copies of field logs should be included in an Appendix of the RI report. Please provide DEQ with an RI addendum that includes the field investigation logs and Oregon Water Resource Department Start Cards*

Response: Copies of all HAI field boring logs are attached. Boring logs for monitoring wells installed at the site will be submitted in a forthcoming deliverable and will include Oregon Water Resources Division (OWRD) start card numbers.

DEQ Specific Comments

Comment 1: *Figure 1. Site boundaries should be added to this figure.*

Response: Figure boundaries will be added to future RA and feasibility study (FS) site location map figures.

Comment 2: *Section 6. Pages 14 and 15. The list of priority pollutant metals on these pages do not include arsenic or lead. Please correct as appropriate.*

Response: References to priority pollutant metals in future correspondence will include arsenic and lead.

Comment 3: *Section 7.3.2. The identification of contaminants of potential concern should be performed and documented in accordance with DEQ risk assessment guidance. The screening of COIs can be performed in the subsequent risk assessment.*

Response: A preliminary screening of Contaminants of Interest (COIs) against U. S. Environmental Protection Agency (EPA) Region 9 Preliminary Remediation Goals (PRGs) for residential sites and DEQ Ecological Benchmark Screening Levels (EBSLs) was conducted in the RI report to identify preliminary Contaminants of Potential Concern (COPCs). The RA will further evaluate COIs and screen for COPCs in accordance with DEQ risk assessment guidance. *See General Comment B.*

Comment 4: *Section 7.3.3.1. Page 22. B-38 Area. Please correct the RBSL reported as 0.0.062 to the correct number.*

Response: The residential soil PRG for benzo(a)pyrene is 0.062 parts per million (ppm).

Comment 5: *Section 7.3.4.2. Page 26. The current and future migration of contaminants away from the source areas (and potentially to the Willamette River) should be evaluated. For example, do the elevated PAH concentrations in boring B-77 groundwater indicate lateral migration towards the river from the B-38 area soil contamination zone? In addition, the distribution of groundwater contaminants around the B-37 drywell needs some further discussion. See General Comment B.*

In some cases, the method detection limit exceeds the Risk Based Screening Level. This uncertainty should be addressed in the Risk Assessment and considered in the monitoring well installation work plan.

Response: An evaluation of the current and future migration of contaminants from identified source areas will be included in the first groundwater sampling report prepared for the site. Monitoring wells have been installed at the site to further evaluate groundwater quality in and down-gradient of source areas (see Response to DEQ General Comment B).

Soil and groundwater analysis will meet the lowest practicable industry standard method detection limit. There will be circumstances where detection limits are above screening goals or ecological benchmark values due to industry standard method capabilities. In such circumstances, this data will be addressed as an uncertainty in the RA.

Comment 6: *Section 7.3.4.3. The presence of DEHP in site groundwater should be evaluated using data from groundwater monitoring wells. Data collected from on-site monitoring wells should be used to assess if DEHP is a contaminant of potential concern. See General Comment B.*

Response: Evaluation of bis(2-ethylhexyl)phthalate (DEHP) in groundwater at the site will be addressed in the monitoring well sampling activities underway at the site (see Response to DEQ General Comment B).

Comment 7: *Section 7.3.4 / 7.3.4.4. Analysis of metals in groundwater was done on filtered samples from push probe borings. While push probe data is useful for the initial characterization of site groundwater, monitoring wells are necessary to collect data of adequate quality to evaluate risk. See General Comment B.*

The last paragraph on page 27 state that all of the detected metals in groundwater at the site "are within the realm of background concentrations for an uppermost water-bearing zone for this area." Site groundwater background concentrations should be provided and their applicability demonstrated in the risk assessment.

Response: Sampling and analysis of total (unfiltered) metals in groundwater is included in the monitoring well sampling activities underway at the site (see Response to DEQ General Comment B). Concentrations of total metals detected in groundwater will be assessed and included as part of the first groundwater sampling report; potential risks will be evaluated in the RA report.

Comment 8: *Section 8.3. The statement that groundwater wells within 0.5 miles of the subject site "are likely no longer in use" is weak and should be followed up with more investigation into the current status of the wells.*

Response: Further research with respect to groundwater wells identified in the RI report within a radius of 0.5 miles of the subject site will be included in the first groundwater sampling report.

Comment 9: *Section 9. Since the risk assessment has not been completed at the site, it should be noted that the hot spot evaluation is preliminary.*

Response: The Port recognizes the hot spot evaluation presented in the RI report is preliminary and the final hot spot determination will be based on the results of the risk assessment.

Comment 10: *Appendix E. Page E4. Section 1.6. The second paragraph indicates both field filtered and unfiltered groundwater samples were collected. Please verify and correct if necessary.*

Response: In some cases, both field filtered and unfiltered groundwater samples were collected from temporary well points for potential metals analysis; however, only dissolved (filtered) metals were analyzed during the RI activities. Total (unfiltered) metals analysis will be conducted as part of the monitoring well sampling and analysis (see Response to DEQ General Comment B).

Comment 11: *Tables. Please correct the tables for use in the risk assessment and feasibility study.*

Response: Tables 2, 4, 7, and 8 of the RI report will be amended as per DEQ's comments, where appropriate, for use in the RA and FS.

DEQ Closing Paragraph *Please provide DEQ with your estimated schedule for submittal of the Monitoring Well Work Plan, Risk Assessment, and Feasibility Study.*

Response: The Port has completed monitoring well installation at the Terminal 1 South property; monitoring well development and sampling. Following receipt of analytical data, the first groundwater sampling report will be prepared and include the following: 1) Documentation of monitoring well installation and sampling; 2) Groundwater flow direction evaluation; 3) Groundwater contaminant distribution assessment; 4) Assessment of unfiltered metals concentrations in groundwater compared to background; and 5) Water well survey.

A schedule for the risk assessment will be finalized after DEQ completes the review of the T1 South Risk Assessment Work Plan.

Please contact me at (503) 944-7533 with any questions.

Sincerely,

Joe Mollusky

Joe Mollusky
Environmental Projects Manager
Properties and Development Services

Attachments (Field Boring Logs)

cc: Bill Bach, Port (w/o attachment)
Jeff Bachrach, Ramis Crew Corrigan & Bachrach (w/o attachment)
Taku Fujl, Hart Crowser (w/o attachment)
Nancy Murray, Port (w/o attachment)
Tim Ralston, Ralston Investments (w/o attachment)
Guy Tanz, Hahn and Associates, Inc. (w/o attachment)

bcc: David Ashton, Port (w/o attachment)
Trey Harbert, Port (w/o attachment)
Bob Teeter, Port (w/o attachment)